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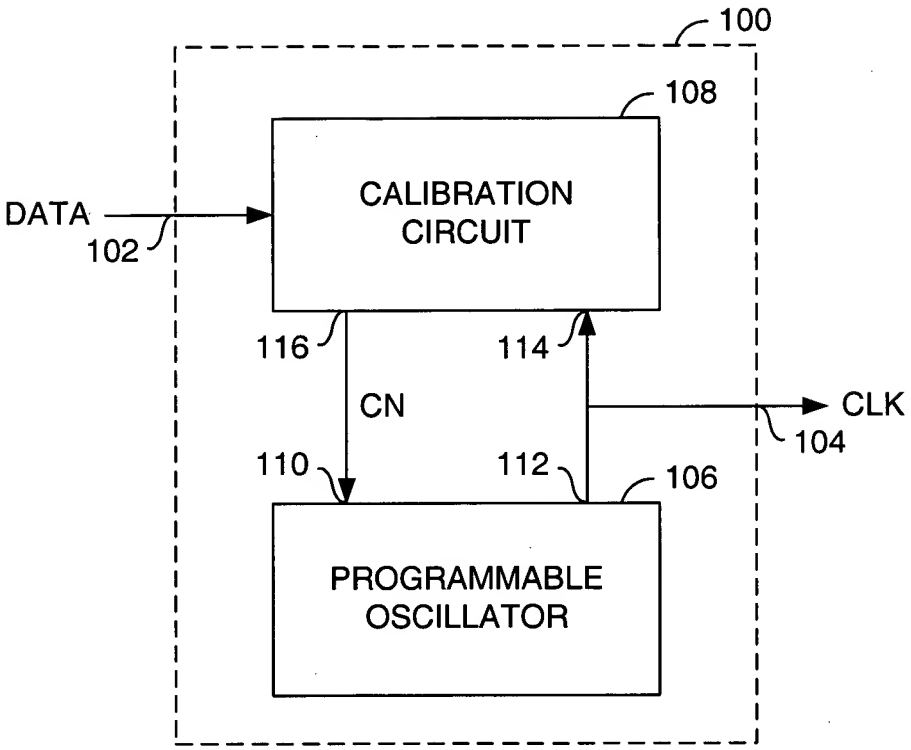

FIG. 1

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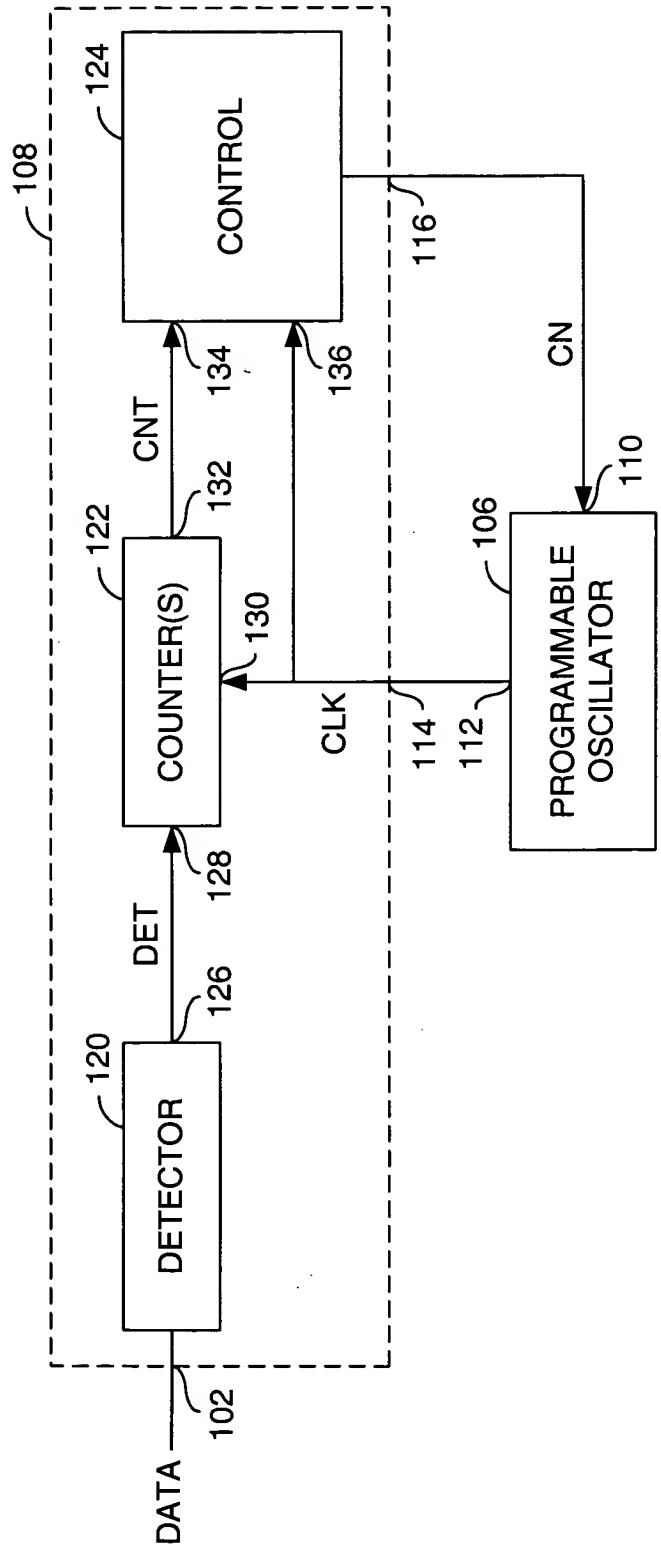

FIG. 2

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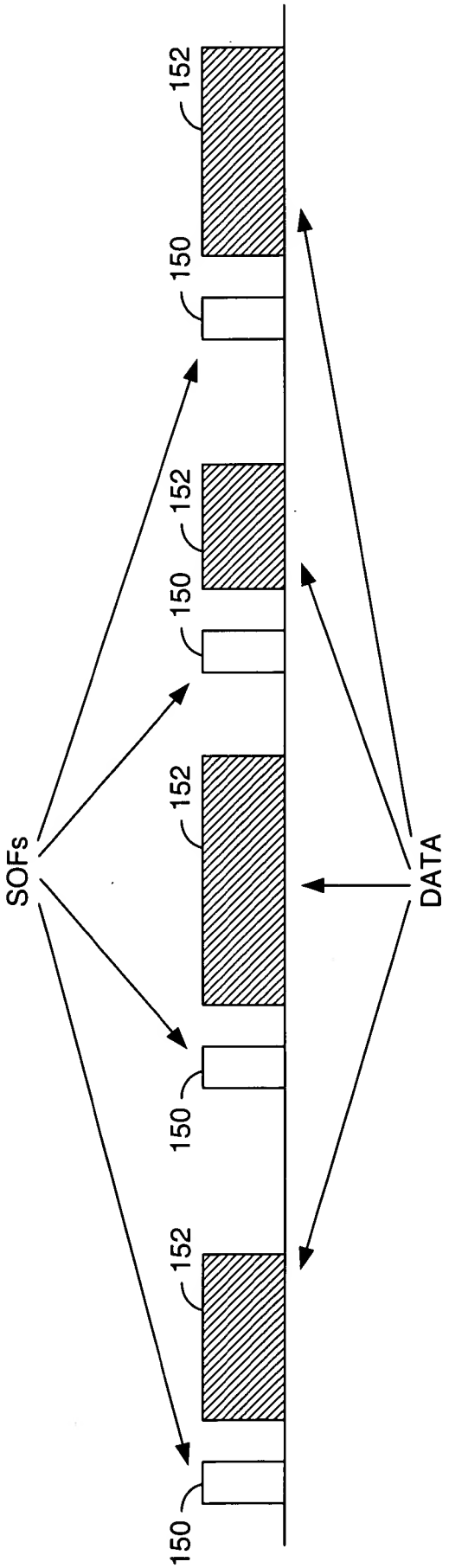

FIG. 3

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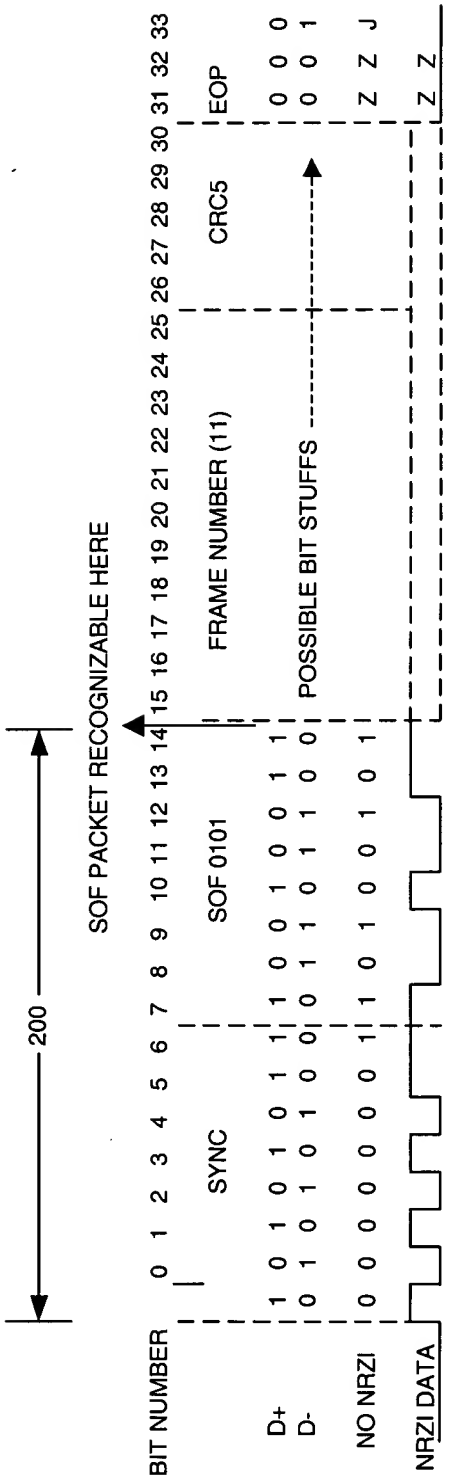

FIG. 4

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IAP22

Jitter Errors		
SOF Detect	175 ns	Synchronization uncertainty
Osc. Jitter	3 ns	
Frame Error	90 ns	Host error beyond +/-0.05% accuracy

INITIAL ERROR

Initial Clock Err	Frame Time (us) Nominal Time	Includes Osc Jitter Min Time	Max Time	Clk: 24 MHz Min Count	Max Count	ClkMinRange		ClkMaxRange	
0.00%	1000000	999732	1000268	23993	24007	23.986	24.000	24.000	24.014
0.10%	1000000	999732	1000268	23969	24031	23.962	23.976	24.024	24.038
0.20%	1000000	999732	1000268	23945	24055	23.938	23.952	24.048	24.062
0.40%	1000000	999732	1000268	23897	24103	23.890	23.904	24.096	24.110
0.60%	1000000	999732	1000268	23849	24151	23.842	23.856	24.144	24.158
0.80%	1000000	999732	1000268	23801	24199	23.794	23.808	24.192	24.206
1.00%	1000000	999732	1000268	23753	24247	23.746	23.760	24.240	24.255
2.00%	1000000	999732	1000268	23513	24487	23.506	23.520	24.479	24.495
3.00%	1000000	999732	1000268	23273	24727	23.266	23.280	24.719	24.735
4.00%	1000000	999732	1000268	23033	24967	23.026	23.040	24.959	24.975
5.00%	1000000	999732	1000268	22793	25207	22.786	22.800	25.199	25.215
10.00%	1000000	999732	1000268	21594	26408	21.587	21.601	26.400	26.416
20.00%	1000000	999732	1000268	19194	28808	19.188	19.200	28.799	28.817
30.00%	1000000	999732	1000268	16795	31209	16.790	16.801	31.200	31.218
40.00%	1000000	999732	1000268	14396	33610	14.391	14.401	33.600	33.620
50.00%	1000000	999732	1000268	11996	36010	11.992	12.000	35.999	36.021
60.00%	1000000	999732	1000268	9597	38411	9.593	9.601	38.400	38.422
70.00%	1000000	999732	1000268	7198	40811	7.195	7.201	40.799	40.823

OSC TRIM Values	24 MHz	@ Clock	Gain Error 12 % Trimmed Step Sizes
Min Step		0.000 MHz	0.0132 MHz
Typ Step	0.015	0.015 MHz	0.0150 MHz
Max Step		0.000 MHz	0.0168 MHz
Linearity Error:		0.75 LSB	

POST-TUNE ERROR

Ideal TuneAmount AveMin	AveMax	Ideal TuneCounts MIN	Post - MIN Tuning Typ-Min	%	Typ-Max	%	TuneCounts MAX	MAX Tuning Typ-Min	%	Typ-Max	%	Max Error... MIN	MAX
0.007	-0.007	0	23.976	-0.1%	24.013	0.1%	0	23.987	-0.1%	24.024	0.1%	0.10%	0.10%
0.031	-0.031	2	23.978	-0.1%	24.023	0.1%	-2	23.977	-0.1%	24.022	0.1%	0.09%	0.09%
0.055	-0.055	4	23.980	-0.1%	24.032	0.1%	-4	23.968	-0.1%	24.020	0.1%	0.13%	0.13%
0.103	-0.103	7	23.972	-0.1%	24.035	0.1%	-7	23.965	-0.1%	24.028	0.1%	0.14%	0.14%
0.151	-0.151	10	23.964	-0.2%	24.037	0.2%	-10	23.963	-0.2%	24.036	0.2%	0.15%	0.15%
0.199	-0.199	13	23.955	-0.2%	24.039	0.2%	-13	23.961	-0.2%	24.045	0.2%	0.19%	0.19%
0.247	-0.247	16	23.947	-0.2%	24.042	0.2%	-16	23.958	-0.2%	24.053	0.2%	0.22%	0.22%
0.487	-0.487	32	23.918	-0.3%	24.071	0.3%	-32	23.929	-0.3%	24.082	0.3%	0.34%	0.34%
0.727	-0.727	48	23.889	-0.5%	24.099	0.4%	-48	23.900	-0.4%	24.111	0.5%	0.46%	0.46%
0.967	-0.967	64	23.861	-0.6%	24.128	0.5%	-64	23.872	-0.5%	24.140	0.6%	0.58%	0.58%
1.207	-1.207	80	23.832	-0.7%	24.157	0.7%	-80	23.843	-0.7%	24.169	0.7%	0.70%	0.70%
2.406	-2.408	160	23.689	-1.3%	24.301	1.3%	-161	23.683	-1.3%	24.301	1.3%	1.29%	1.32%
4.806	-4.808	320	23.402	-2.5%	24.589	2.5%	-321	23.394	-2.5%	24.589	2.5%	2.49%	2.53%
7.205	-7.209	480	23.116	-3.7%	24.877	3.7%	-481	23.106	-3.7%	24.879	3.7%	3.68%	3.72%
9.604	-9.610	640	22.829	-4.9%	25.165	4.9%	-641	22.819	-4.9%	25.169	4.9%	4.88%	4.92%
12.004	-12.010	800	22.542	-6.1%	25.453	6.1%	-801	22.530	-6.1%	25.457	6.1%	6.08%	6.13%
14.403	-14.411	960	22.256	-7.3%	25.741	7.3%	-961	22.242	-7.3%	25.747	7.3%	7.27%	7.32%
16.802	-16.811	1120	21.969	-8.5%	26.030	8.5%	-1121	21.954	-8.5%	26.036	8.5%	8.46%	8.53%

FIG. 5